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Executive Summary

Preparing to Meet the Challenge

An Assessment of Invasive Species Management in Idaho

Prepared for:

The Idaho Invasive Species Council

With the Support of:

The Idaho Department of Agriculture
and

The Nature Conservancy



**Northwest Natural
Resource Group, LLC**

Meeting the Challenge

Invasive species—those nonnative plant, animal and microbial organisms that cause widespread economic and environmental damage—are becoming a major issue, not only in Idaho but across the country. Hundreds of nonnative organisms from around the globe have reached Idaho through trade, travel, intentional introduction, and dispersal from neighboring states. Free from the natural competitors, predators, and parasites that keep them in check in their native range, invasive species reproduce rapidly. They invade agricultural lands and waterways and displace desirable plants and animals. Invasive species are truly a form of biological pollution.

In the fall of 2003, Idaho's Invasive Species Council published a full report titled *An Assessment of Invasive Species Management in Idaho*. This Executive Summary highlights the main points from the full report. It describes the threat invasive species pose to Idaho's economy and environment and examines state and federal efforts to prevent and manage invasive species. In addition, this summary highlights effective points and deficiencies of some current programs and lists eight recommendations the State of Idaho could take to meet the threat of invasive species.

Idaho has taken a first step toward a coordinated and effective statewide invasive species program by creating the Idaho Invasive Species Council, named by Governor Kempthorne in 2001. The sponsors of this Assessment—The Nature Conservancy and the Idaho Department of Agriculture—intend for it to be a source of information for the Council and a springboard for further actions to ensure that the Council can effectively carry out its mission. Additionally, the Assessment will help to inform policy makers and various stakeholders about the threats posed by invasive species and what must be done to minimize those threats.

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Introduction

The Assessment is meant to heighten awareness of the invasive species problem, summarize ongoing efforts both in Idaho and nationally, examine the strengths and weaknesses of these efforts and suggest some needed changes. Just as Idahoans have met the challenges posed by a host of plant and animal pests or noxious weeds, these efforts need to be extended to invasive species that might arrive here or, if here already, might spread uncontrollably to other parts or the state. This is not simply a matter of "doing more of the same." The problem is too large and the risks to Idaho's economy and ecological values too high. Rather, a more comprehensive and coordinated effort will be needed to stem an increasing number of undesirable species brought here by an increasingly complex and growing number of invasion pathways.

This Summary describes major threats, presents key challenges and findings, and proposes eight recommendations from which agencies, policy makers, and landowners can move forward in a more coordinated and comprehensive way.

The Threat of Invasive Species

Idaho has benefited greatly from the introduction of many nonnative species of plants and animals and suffered from others. It would, indeed, be hard to envision an economy or a lifestyle in Idaho without potatoes, chukar partridges, apples or wheat—all species that evolved elsewhere and were brought to this state. On the other hand, there are species of plants, animals and microorganisms that have caused great damage to the state. For example, white pine blister rust has completely changed the composition of north Idaho's forests while cheatgrass encroaches on thousands of acres of otherwise productive rangelands. These, too, are nonnative species that arrived in Idaho by accident, but once here, thrived by destroying or displacing far more desirable native species.

Introduced species that escape their intended niche or which are unintentionally brought to the state and then cause either economic or ecological harm are termed "invasive." Idaho is vulnerable to such species, due to the variety of climates and habitats as well as the vast rural areas where invasions can spread unnoticed until eradication is too late. The danger is magnified by recent growth in numbers of visitors to Idaho as well as in interstate and international commerce. As Idaho's connections to the rest of the world increase, so does the pace of new infestations by undesirable, nonnative species—ranging from noxious weeds to insect pests.

There are two types of invasive species—those not here but are likely to arrive, and those here now that have proven to cause damage and which may multiply or spread to areas of the state where they are not now found. Both types arrive through a variety of invasion pathways. People buy “exotic” pets or fish and allow them to escape to the wild. Boats or boat trailers harbor aquatic animals or weeds and then transfer them to Idaho’s waters. Imports of agricultural products or nursery stock can bring insect pests or diseases, and visitors from other countries may inadvertently bring seeds, insects or disease organisms with them. Once here, these new organisms can spread in numerous ways. Livestock and recreational vehicles carry weed seeds to new areas, as can the wind. Aquatic plants and animals can simply float downstream, and many species spread the “old fashioned way”—reproducing and moving into areas they do not currently occupy.

The enormous impact of these invasions is already evident as invasive species have damaged Idaho’s rangelands, waterways, farms, forests, and urban environments. They even threaten human health. Noxious weeds like yellow starthistle infest vast areas of formerly productive rangelands in Idaho—displacing wildlife and reducing livestock grazing. Eurasian watermilfoil chokes swimming and boating areas in several popular lakes. Hawkweed is out-competing tree seedlings in northern Idaho forests. Cereal leaf beetle has cost Idaho wheat farmers thousands in crop damage and control costs. Dutch elm disease has decimated elm trees that once graced city parks. And the West Nile virus, which has not yet reached Idaho, can be deadly to humans and animals.

Other invasive species that have yet to reach Idaho could cause new and even more damaging impacts. Zebra mussels, a scourge in the Midwest, clog irrigation and power turbine intakes; the citrus longhorned beetle, originating in China and spreading to the United States in wood packing material or bonsai plants, is an urban pest. Once established, the beetles kill common shade trees and eradication requires the removal of all surrounding trees, devastating whole city blocks.

Key Findings

Fortunately there are programs in place that have, within limits, been effective in keeping many invasive species at manageable levels or in preventing their entry into the state. Existing efforts have largely been directed toward various agricultural pests or noxious weeds. Idaho has enacted laws to direct these programs, including specific statutes to address



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Aquatic Pest— Zebra Mussels

Zebra mussels were discovered in 1988 in the water connecting Lake Huron and Lake Erie. Within two years they were found in all the Great Lakes. By 2002, 20 eastern states reported the occurrence of zebra mussels. While no live colonies are currently reported in the Pacific Northwest, zebra mussels were recently found on a recreational boat and a trailer in eastern Washington. They breed prolifically, and can live for several days out of water in cool or humid conditions. If this mussel were introduced in Idaho, it could have disastrous effects on irrigation systems (by clogging sprinklers and reducing flows in pipes), on hydroelectric power plants, and on fish ladder structures for salmon in the Clearwater, Snake, and Columbia River drainages.

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**It is recommended that
this Assessment become
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noxious weeds, plant pests, exotic animals, forest pests and human health. Significant financial resources have been dedicated to the problem. While it is difficult to derive a total expenditure in Idaho for all invasive species, the available data indicates that the amount spent to control noxious weeds and agricultural pests probably exceeds \$10 million per year.

However, despite many efforts, the invasive species problem is growing. New invaders cross Idaho's borders each year. Some, like forest insects or agricultural pests, are tracked closely and controlled by public agencies. Others may go unnoticed, growing quietly on our lands or in our waters until their populations explode to nuisance levels. Idaho is good at managing some types of invasive species and ineffective at managing others. Overall, management is fragmented, marked by gaps and overlaps in authorities and responsibilities among agencies who could be powerful allies in the fight against invasive species.

One product of the piecemeal approach used in the past in managing invasive species is that in Idaho, as well as at the federal level, a large number of agencies and organizations share occasionally conflicting or overlapping authorities. The Idaho Departments of Agriculture, Lands, Fish and Game, Environmental Quality, Transportation, Parks and Recreation, along with the University of Idaho all have roles to play in invasive species management. They are joined by federal agencies in Idaho that include the Environmental Protection Agency (EPA), the Forest Service, Bureau of Land Management (BLM), Fish and Wildlife Service, various Department of Agriculture agencies, Commerce and the military, among others.

One result of the large number of participants is recognition of the need for a coordinating body. Both the state and the federal government have created "invasive species councils," established, in both cases, through executive orders. In addition, Congress has introduced a number of bills to better coordinate invasive species programs or to authorize additional financial support for them. Idaho's congressional delegation has strongly supported these efforts. Much of the anticipated future financial support would flow through to the states. While there is a clear role for the federal government in coordination, sponsoring research and extension of knowledge, or monitoring international or interstate commerce to prevent entry of undesirable species, much of the work to track, prevent, eradicate and control invasions of undesirable species will fall to the individual states.

Although progress is being made in stepping up to the invasive species challenge, much work remains. There are gaps in existing prevention and control programs that need to be filled and there are new actions needed if we are to be effective in the future. The Assessment reviewed existing local, state, and federal programs to protect Idaho from invasive species. A review of the invasive species literature was conducted, dozens of agency staff and other experts were interviewed, and a survey taken of Idaho's invasive species managers. The resulting key findings include:

- Invasive species management in Idaho is fragmented. Responsibilities and authorities for invasive species management are not clearly defined for most agencies. There is no clear relationship among budgets, needs, and results. There is a need to set priorities and measure results.
- The levels of education and awareness among landowners, policy makers, and the general public are not commensurate with the degree of the problem. Landowners need to better understand their obligations to control weeds and the costs associated with failure to manage them. Political leaders need to ensure adequate funding, appropriate legal authorities, and accountability from the agencies. The general public needs to understand invasive species so people become mindful of actions they can take, and join in building broad public and political support for adequate programs.
- Idaho does a good job at managing noxious weeds, agricultural pests, forest insects, and invasives that threaten human health. Other invasive species, such as aquatic invaders, receive little attention.
- Resources are scarce, so we must ensure that we expend them wisely. Science can help us set priorities and develop cost-effective methods for managing invasive species.
- There is a need for adequate resources to do the job, including funding. This was perceived as the greatest barrier to effective invasive species management. Counties have widely different levels of resources and capacities to fight a problem that affects everyone.
- It is better to prevent than to control, due to our limited ability to eradicate or control invasive species once they become established. Idaho managers placed a high premium on prevention (i.e. actions to keep an invasive species from ever arriving here) and on early detection and rapid response once a species arrives.



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Rangeland Noxious Weed—Yellow Starthistle

The largest infestation of these noxious weeds is generally restricted to the area from Lewiston north, with over 200,000 acres infested in Clearwater, Idaho, Latah, Lewis, and Nez Perce Counties. But new colonies have been detected as far south as Cambridge. Most of Idaho's rangelands are susceptible to invasion. Yellow starthistle affects livestock production by reducing grazing capacity. It is also poisonous to horses. The impacts on recreation, particularly upland hunting are extreme, because once it becomes established, the spiny seedheads make sites difficult to walk through. Control is possible but expensive.

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Recommendations

One of the tasks associated with the Assessment was a comprehensive survey of professionals currently engaged in invasive species management in Idaho. Their wisdom and experience plus the track record of programs to control noxious weeds and agricultural pests, human health or fish and wildlife resources provide a basis for some recommendations to be considered by Idaho's policy makers. Foremost among these is the recommendation that the Assessment become the basis for a more comprehensive plan designed to address the threats posed by invasive species in Idaho, in a coordinated and effective manner and with a response that is adequate to the size of the risks. Other recommendations include:

Establish an Equitable and Stable Source of Funds

Insufficient funding and staff was noted as a major barrier by a great majority of Idaho's invasive species managers. Additional money is fundamental to overcoming the gaps in public and landowner education cited by Idaho managers as well as to achieving the goals of prevention and early detection. The sources and amounts of additional money are guaranteed to create a discussion. The broad nature of the causes and contributors to the problem implies that a broad-based tax is appropriate as a funding mechanism. Such a tax might take the form of a small surcharge for boat, RV or off-road vehicles licenses, fish and game licenses, exotic species importation permits or similar activities closely tied to invasive species pathways or through general fund tax revenues.

Conduct Educational Programs

There are obvious educational needs to be met, falling into two broad categories: (1) property owners, and (2) those whom have some relationship with invasive species pathways. The latter category ranges from nursery operators who import exotic species to recreationists who bring in boats or recreational vehicles from other locales.

Set Priorities for Species to be Addressed

There is a wide variety of species requiring control efforts and little consensus among managers on priorities for them. Unfortunately, this implies a program that is reactive, since priorities are set by actual occurrence and not by preventative actions or for especially high-risk species that may not be here yet. Targeting high-priority species early on in the implementation of a comprehensive invasive species management program might serve to create a better focus and mission for the program.

Establish a Process to Assess Risks Posed by Various Species

Efforts to prioritize species and then work to prevent or manage outbreaks of them in Idaho must be accompanied by an assessment of the risk that each poses. Risk assessment is a combination of identifying species that might arrive here (the risk of introduction) and of the damage they would likely cause if they were introduced (the risk of significant damage). Species that have a high risk of appearing in Idaho and a high risk of causing widespread, significant damage if they do, require a higher priority for prevention or control (if it is already here) than those with lower risks.

Coordinate Invasive Species Work within State Government

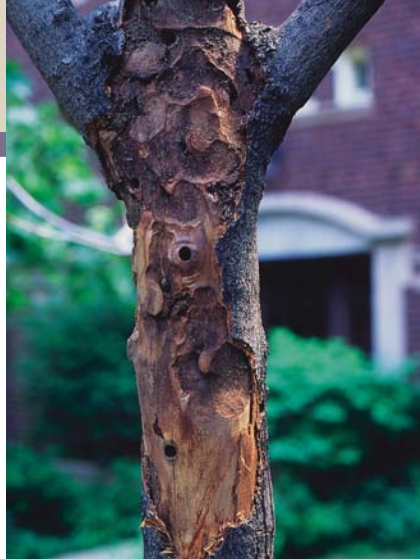
It is important to ensure that a comprehensive invasive species program in Idaho is not diluted by competing efforts among various agencies. There is a need to examine whether the invasive species authorities for each of the state agencies involved in invasive species management are clear, and that each agency is enthusiastic about carrying out its responsibilities. The Idaho Invasive Species Council is probably best equipped to create a sense of mission among all involved agencies and to ensure that the overall program receives the attention it deserves within state government.

Enact the Necessary Changes in State Law

There are some additional statutory authorities that should be considered. The first is the need to consider providing the Idaho Invasive Species Council with a clear statutory basis for developing and implementing a comprehensive invasive species program that cuts across the numerous agencies involved in it. Another change in the law that should be considered is a measure that would “hold harmless” landowners who find and report the presence of high priority invasive species on their lands. For invasive species, it should be made clear when landowners incur liability for control measures and when they do not.

Identify Research Needs

There is much to be learned about invasive species, ranging from how some microbes might spread to finding acceptable biological controls for noxious weeds. Fortunately, the University of Idaho has a proven track record for research relating to both agricultural pests and noxious weeds. These efforts should be a basis for future work, and those agencies involved in invasive species management will need to identify gaps in their knowledge and work closely with research institutions to fill those gaps. It is equally important to communicate information regarding invasive species through extension programs.



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Urban Pest—Asian Longhorned Beetle

A serious pest in China is making its way into the United States through shipments of wood products and through popular “bonsai” nursery stock. The Asian Longhorned beetle attacks many popular shade tree species, including maples, birches, elms, horsechestnut, poplars and willows—all of which are common in Idaho’s cities and towns. Repeated attacks will ultimately kill the trees. Unfortunately, once the beetles are discovered, the only effective control is to cut down all surrounding trees, and chip or burn them. In this manner, the shade trees of entire city blocks and neighborhoods are lost.

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What Idaho needs now

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Hold an Idaho “Invasive Species Summit”

There is a need to convene a “summit meeting” of Idaho invasive species managers, legislators and other elected officials, representatives of the scientific community and those who otherwise have a stake in invasive species management to review the current situation and discuss what future steps will be needed. Perhaps the biggest reason for such a gathering would be to begin to focus on the structure of a comprehensive invasive species program in Idaho, just as the “Weed Summit” in 1998 paved the way for the Cooperative Weed Management Areas and the implementation of a comprehensive weed strategy in the state.

Conclusions

Unfortunately, the question is not whether Idaho will see additional or spreading invasions of undesirable invasive species, but rather which species will arrive, how and where they will show up and what the magnitude of the damage or risk will be. That is the reality, not only in Idaho, but nationwide. On the positive side for Idaho is a wealth of experience in addressing many such species, a work ethic and organization that is well suited as a model for a larger effort and some time to create that effort.

What Idaho needs now are the financial resources, legal authorities and organization that can meet the coming challenges. This must be coupled with public understanding of the need to take action and the political will to do so. The risks of inaction, as measured by the potential costs to our economy and to our natural world, far exceed the present costs of recognizing those risks and doing what is needed to face up to them.

To print a copy of the full report, visit one of the following websites:

Idaho Department of Agriculture – www.agri.state.id.us

Idaho Department of Fish and Game – www2.state.id.us/fishgame/fishgame.html

Idaho Office of the Governor – www2.state.id.us/gov

Idaho State Parks and Recreation – www.idahoparks.org/parks

To receive a copy of the report in the mail, call
the Department of Agriculture at (208) 332-8500